

**ASBESTOS INSPECTION REPORT
FOR
POWELL ELEMENTARY SCHOOL
SCHOOL NUMBER 300**

**Contract No. DACA31-94-D-0025
Delivery Order No. 0153**

Prepared for:

U.S. Army Corps of Engineers
Baltimore District
10 South Howard Street
Baltimore, Maryland 21201

Prepared by:

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(410) 771-4950

JUNE 17, 1999

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Anwer J. Hasan
Project Manager

Date

JUNE 17, 1999

INSPECTIONS, BULK SAMPLING, AND ASSESSMENTS

Inspections were conducted by: David Lyles

Date 5/19/99

Bulk samples were collected by: David Lyles

Date 5/19/99

Assessments were made by: David Lyles

Date 5/19/99

Signature: 

Name: David Lyles

*Accreditation No. 98-09-08-01

State and Date: MD, September 9, 1999

* Copies of State license or training course certificates are contained in Appendix D.

LABORATORY STATEMENT AND CERTIFICATION*

All bulk samples were analyzed by: AMA Analytical Services

Address: 4475 Forbes Blvd.
Lanham, MD 20706

This laboratory meets all requirements of 40 CFR 763.87 and has received accreditation for Polarized Light Microscopy (PLM) analysis under the **NIST/NVLAP Program** (NVLAP # 101143-0) for bulk sample analysis. **

* See Appendix E for a copy of laboratory's NVLAP certificate.

** See Laboratory Certificates of Analysis for analyst(s) name(s) and signature(s) and date(s) of analysis in Appendix C.

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LIST OF ACRONYMS AND ABBREVIATIONS

ACBM	Asbestos-Containing Building Materials
AHERA	Asbestos Hazard Emergency Response Act
AIHA	American Industrial Hygiene Association
CFR	Code of Federal Regulations
DC	District of Columbia
EPA	U.S. Environmental Protection Agency
HEPA	High-Efficiency Particulate Air
NIST	National Institute of Science and Technology
NVLAP	National Voluntary Laboratory Accreditation Program
OSHA	Occupational Safety and Health Administration
PLM/DS	Polarized Light Microscopy With Dispersion Staining
TSI	Thermal System Insulation

1. INTRODUCTION

EA Engineering, Science, and Technology conducted an inspection for asbestos-containing building materials (ACBM) at Powell Elementary School on May 19th, 1999. The asbestos inspection was conducted to identify the presence and location of ACBM in order to comply with the U.S. Environmental Protection Agency's (EPA's) law, the Asbestos Hazard Emergency Response Act (AHERA), and the final rule, Asbestos-Containing Materials in Schools, 40 Code of Federal Regulations (CFR) Part 763, which establishes policies and procedures for management of asbestos. Such policies include provisions for performing inspections to identify the existence, extent, and condition of ACBM (both friable and non-friable). The asbestos inspection activities were performed in accordance with 40 CFR Part 763 requirements.

This inspection was nondestructive in nature, assessing only accessible areas throughout the building. Inaccessible areas not included in the survey consisted of wall interiors and areas above fixed ceilings (plaster, sheetrock, splined, etc.) that would have required demolition and areas where accessibility was impeded due to a health or safety hazard. Suspect materials that were evaluated included, but were not limited to, surfacing materials, including plaster and other troweled-on materials; thermal system insulation materials, including fittings, pipe insulation, and packings; flooring materials, including vinyl tile and sheet flooring; and miscellaneous materials, including mastics, ceiling tile, vinyl baseboards, and other materials. Fire doors and other materials that when sampled would destroy the material's integrity, were assumed to be ACBM.

EA does not guarantee the absence of asbestos potentially contained in the buildings materials located in inaccessible areas or in samples analyzed by the method described herein, nor does EA accept liability if such is found at some future time or could have been found if destructive inspection was conducted or if other analytical methods were used.

2. SCOPE OF WORK

The purpose of the Asbestos Inspection was to identify and assess the condition of ACBM in the building. Project activities included systematic facility inspections consisting of visual survey of accessible areas for suspect ACBM, sampling and analysis in order to assess type and content of asbestos in suspect materials, and documentation of inspection information.

The LEA used, and will use, asbestos inspectors to conduct the inspection and used, and will use, persons that have been accredited by and EPA approved course under 206(c) of Title II of TSCA for the design and to carry out response actions, except for operations and maintenance. Inspection documentation was recorded on Asbestos Inspection Forms, and included homogeneous area number; suspect ACBM description; suspect ACBM type (surfacing, thermal, or miscellaneous); total quantity, and location; and sample information. In addition, the current physical condition and potential for future disturbance and/or damaged of suspect ACBM identified during the survey was assessed, addressing such factors as causal conditions of visible damage, physical setting in relation to potential damage-causing elements, and friability. These factors form the basis of the hazard ranking of each suspect asbestos-containing material confirmed as containing asbestos, presented in Section 4 of this report. The assignment of a hazard ranking was conducted in accordance with AHERA prescribed methodology.

The Scope of Work also included design of an Asbestos Database to catalog and organize information collected during the Asbestos Inspection, and generated through laboratory analysis of submitted samples of suspect ACBM. The Asbestos Database allows the user to manipulate survey data by school number, floor number, room number, homogeneous area number, and sample number within a building, and identifies sample locations, analytical results, exposure potential as measured by hazard ranking, and ACBM quantities. In addition, homogeneous area-specific information consisting of recommended abatement action and estimated removal and replacement costs is presented for each homogeneous area identified during the inspection.

3. METHODOLOGY

3.1 INSPECTION

3.1.1 Documentation

Two designated Asbestos Inspection Forms (Appendix A) were utilized to document pertinent inspection information including sample data, homogeneous area descriptions, and assessment parameters. These forms were used in conjunction with supporting field note documentation to aid in assessing removal costs and identifying circumstances that may impede abatement operations. The forms fully document information for each sample of suspect material collected.

The first form utilized by the inspectors was Asbestos Survey Data Form – Form B. During the walkthrough inspection, Form B was used by the inspectors to record the quantity of each suspect homogenous area in each room. Assessments of the quantity of materials were made by estimated lengths, widths, heights, and diameters. Form B was also used to record locations of significantly damaged suspect ACBM and to identify areas of the building that were not inspected and the reasons why.

The second form that the inspectors used was Asbestos Survey Data Form – Form A. On this form, the inspectors noted the following information for each homogeneous area: homogeneous area number, description of material, material type, total quantity, location by floor and room, friability, condition, potential for disturbance, and sample number and location. This information allowed the building inspector to accurately and efficiently categorize the material type, condition, and damage potential in accordance with the requirements established by AHERA.

Drawings were used when available, and when providing sufficient detail, during sampling to show sample locations and locations.

The surveying and sampling was conducted by a two-person team. The accredited asbestos inspector of the two-person team conducted a visual walk-through survey of accessible areas of the building to identify, quantify, and assess suspect ACBM. Accessible areas of the building that were inspected included, but were not limited to, mechanical rooms, rest rooms, class rooms, offices, accessible pipe chases, basements, areas above drop and accessible suspended ceilings, and other accessible areas containing suspect ACBM. Inaccessible areas of the building included areas above fixed ceilings (plaster, sheetrock, splined, etc.) and areas in which access presented a health and safety hazard. Sample sites that could be safely accessed were chosen from the accessible building areas.

ACBM may be found in, but not limited to, the following applications: sprayed-on thermal system insulation and fire proofing, ceiling textures, acoustical surfacing material, pipe and boiler insulation, water tank insulation, duct insulation, wallboard, ceiling tile, roofing, floor tile, mastic, stucco, siding/asbestos cement board (Transite), cove molding, fire proofing material, etc. Dimensions of suspect asbestos materials were measured and quantities reported. EA

personnel selected sample sites within the buildings that best represented the homogeneous areas (i.e., those areas that appear to be the same in size, usage, color, texture, etc.) to be sampled.

3.1.2 Bulk Sampling

3.1.2.1 Sample Collection

Bulk samples were taken in accordance with guidelines provided in 40 CFR Part 763 and in the EPA publication *Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Material* in a manner so as to minimize disruption of the function or appearance of the surface. The building inspectors complied with the sampling requirements for the various types of materials as specified in 40 CFR Part 763.86.

Depending upon material condition and location, sample collection was performed by a building inspector wearing a half-face or full-face high efficiency particulate air (HEPA) air purifying respirator. Building inspectors complied with the respiratory protection requirements of EA's Corporate Safety and Health Program Manual and the Site-Specific Safety, Health, and Emergency Response Plan for Asbestos Sampling. Compliance with these protocols ensured compliance with 29 CFR Part 1926.103, Respiratory Protection, and 29 CFR 1926.1101(h), Asbestos Respiratory Protection.

For safety reasons, room occupants were requested to temporarily vacate the area while samples were being collected. EA sampled in two-person teams. While one person took a sample, the second person's duty was to prevent others from accessing the room or area. Locations where samples were collected were sealed with an encapsulant, spray paint, and/or duct tape when required to maintain structural integrity.

Building inspectors collected samples after assessing material condition and quantities. Bulk samples were representative of the suspect material and were sufficient enough in quantity to allow proper analysis. To be sure that a sample was representative, the inspector used a coring device or knife to obtain a sample from the surface through to the substrate. The sample size depended on the thickness and application of suspect ACM. The sampling procedure consisted of the following steps:

- Step 1. Select sample site based on homogeneity, localized damage, accessibility, and inconspicuous locations of suspect ACM
- Step 2. Don respirator and rubber gloves. When required, put on suitable protective clothing to prevent contamination of street clothing.
- Step 3. Wet surface to be sampled.
- Step 4. Remove sample.
- Step 5. Immediately place sample in sample container.

- Step 6. Seal disturbed area with encapsulant, spray paint, and/or duct tape.
- Step 7. Clean up any fallen debris.
- Step 8. Label container.
- Step 9. Note sample on Asbestos Inspection Form.
- Step 10. Identify sample information on Chain-of-Custody Form.

Field team members collected a variety of suspect ACBM samples throughout the interior of the building. It was left up to the inspector's discretion to determine "how to" collect each sample, since no two material locations are sampled in exactly the same way.

Precautions were taken during sample collection to minimize the risk of exposure to inspection personnel and/or occupants of the building. Samples were collected while the immediate area was unoccupied. Inspection personnel wore appropriate protective equipment. Debris that was generated due to sampling was picked up using wet methods, and disposed of according to District of Columbia (DC) and Federal regulations.

Practices that were incorporated during sampling included using a plastic drop cloth; adequately wetting the sample area using amended water to alleviate dust generation; wet-wiping the sampling tools to prevent cross contamination; repairing sample sites with encapsulant, spray paint, and/or duct tape; and collecting samples in pre-labeled, air-tight, rigid containers.

Table 3-1 lists the minimum number of samples collected for different suspect ACBM categories. Sample locations were randomly selected.

TABLE 3-1 BULK MATERIAL SAMPLING STRATEGY

Type of Material	Quantity	Units ^a	No. of Samples ^b
Friable Surfacing	<1,000	SF	3
	1,000 to 5,000	SF	5
	>5,000	SF	7
Pipe Insulation	System	LF	3
Pipe Fittings	System	EA.	1-3
Miscellaneous Materials (Ceiling Tile, Floor Tile, etc.)	<1,000	SF	1
	1,000 to 5,000	SF	2
	>5,000	SF	3

^a Unit abbreviations: LF = linear feet, SF = square feet, EA. = each.

^b The values represent minimum quantities of samples to be collected.

Samples were taken from areas in a manner so as to minimize disruption of the function or appearance of the surface.

The inspection team reinstalled standard drop-in and spline type ceiling panels removed during sampling.

Insulation samples were collected in mechanical rooms, or other easily accessible areas where insulation was present.

Wallboard (drywall) samples were collected in closets or inconspicuous areas. At least one sample of the composite wallboard system, including wall spackling material and multiple layers of wallboard when present, was collected from each homogeneous area of wallboard.

Carpeting was pulled back to check for suspect floor covering and to sample carpet mastic.

Interior wall samples were collected in closets or inconspicuous areas.

Pipe insulation samples were collected from the ends of the pipe or from damaged areas when possible. Otherwise, core samples were collected. At least three samples were collected per homogeneous area/system.

Linoleum sheeting and vinyl tile samples were collected from damaged areas, corners, or in inconspicuous locations. The mastic that holds the material in place was also sampled.

Ceiling samples were collected in the corner of the room, in closets, or other inconspicuous locations.

Flex duct connectors or vibration dampener samples were collected from edges or from loose strands of the material.

Roof material was not inspected or sampled. However, roofs were accessed as needed in order to inspect for other suspect ACBM.

Suspect insulating materials were collected from pipes, the exterior and/or interior of ducts, and in attic spaces.

The interior and exterior doors of each building were examined to assess whether they were fire doors. Samples were not collected from fire doors as no accessible core material was present. EA did not disassemble or damage doors.

The number of samples collected from various materials was in accordance with Table 3-1, when possible.

Each sample was identified on the sample container label, which consisted of an alpha-numeric code unique to each sample. The alpha-numerical code included the school number and a

two-digit, one letter sample number for that particular sample location. For example, number 000-01A is the first sample from homogeneous area 1 in School 000.

At the time of collection, samples were placed in labeled, air-tight containers. At the completion of sampling, containers were placed in plastic bags, which, in turn, were sealed inside appropriate-sized cardboard boxes. The chain-of-custody form was enclosed inside the cardboard box.

Identical sample identification codes were used on the Asbestos Inspection Form, building drawings, and on the laboratory chain-of-custody form.

3.1.2.2 Chain-of-Custody

Prior to the close of each business day, EA inspectors completed the EA chain-of-custody form (Appendix B) for samples collected during that day. This document was utilized for tracking all samples being collected and transported to the accredited asbestos laboratory. The intent of the chain-of-custody procedure is as follows:

- Ensure that samples are handled appropriately.
- Ensure that designated personnel obtain custody of the samples.
- Verify receipt of the actual samples collected and the correct number of samples collected.
- Ensure that samples accepted by the laboratory are untampered, intact, and in as-packaged condition.

Chain-of-custody forms, which were completed and signed by the inspectors at the end of each business day, were placed in the secondary bags with the samples.

Prior to shipment, each sample container was placed in a plastic bag for double containment. Each secondary containment bag contained the samples from a particular building and completed chain-of-custody forms. The bags were then placed in rigid containers for delivery via common courier to the appropriate analytical laboratories. Proper labels were affixed to each sample canister.

Bulk samples were received, logged, and analyzed in a National Voluntary Laboratory Accreditation Program (NVLAP)/American Industrial Hygiene Association (AIHA) accredited laboratory, strictly in accordance with the written, approved laboratory operations manual.

The laboratory coordinator or his designated representative was responsible for receipt and acceptance of samples submitted to the laboratory. Upon receipt of samples the following steps were followed:

- Step 1. The receiver inspected each package for damage to ensure that the seal was undisturbed.
- Step 2. If damage was evident or if the seal was broken, the receiver did not submit the affected samples for analysis until the matter was resolved to the satisfaction of the receiver.
- Step 3. Upon acceptance of each package, the receiver signed and dated the chain-of-custody information on behalf of the laboratory facility.

Once samples were properly received, the laboratory coordinator logged-in the samples. A log-in report was then provided to the laboratory supervisor so that work assignments and schedules could be developed.

Upon receipt at the laboratory, the security and condition of each package was verified. Upon acceptance of the package, each sample received was cross-checked with those indicated as being collected at the bottom of the form.

The chain-of-custody became a permanent part of the project data. Throughout the process, efforts were made to minimize the number of personnel involved in transferring samples.

3.1.2.3 Laboratory Analysis

The laboratory selected for this survey is accredited by the National Institute of Science and Technology's (NIST's) NVLAP and by the AIHA.

The primary samples were sent to AMA Analytical. Bulk samples were analyzed for mineral composition using Polarized Light Microscopy with dispersion staining (PLM/DS). This analysis was performed in accordance with "Interim Method for Determination of Asbestos in Bulk Insulation Samples," EPA-600-M4-82-020.

Analytical results for each sample indicate the following:

- Name of analyst
- Date of analysis
- Project identification
- Sample description
- Asbestos content (percent), if present
- Type of asbestos, if present
- Matrix composition

A positive stop was utilized by the laboratory for multiple samples of a given homogeneous area (i.e., if the first sample from a series of samples representing a given homogeneous area was positive for asbestos, the other samples in that series were not analyzed).

3.2 HAZARD ASSESSMENT

In accordance with AHERA methodology, for each ACBM area, the inspector assessed the current condition of the material and classified it into categories defined in "Asbestos-Containing Materials in Schools; Final Rule and Notice" (40 CFR Part 763.88). The level of potential disturbance was then assigned based on definitions for accessibility, potential for contact, influence of vibration, and potential for air disturbance.

Finally, the inspector assigned a Hazard Rank by combining the condition and potential for disturbance factors on the as shown below:

<u>Hazard Rank</u>	<u>Category</u>	<u>Description</u>
7	2	Significantly damaged friable (surfacing ACBM or miscellaneous ACBM)
6	1	Damaged or significantly damaged thermal system insulation (TSI)
5	-	3 Damaged friable (surfacing ACBM or miscellaneous ACBM)
4	5	Friable (surfacing ACBM or miscellaneous ACBM or TSI) with potential for significant damage
3	4	Friable (surfacing ACBM or miscellaneous ACBM or TSI) with potential for damage
2	6	All other friable ACBM, suspect friable ACBM
1	7	All other non-friable surfacing or miscellaneous material

This assessment was used by a management planner to identify the response actions required for each homogeneous area of confirmed or assumed ACBM.

3.3 COST ESTIMATE

An estimated removal and replacement cost is presented in the asbestos database tables for each homogeneous area confirmed or assumed as asbestos-containing. Table 3-2 defines the unit costs for removal and replacement applied to the total quantity of material within a homogeneous area. The cost estimate is derived by multiplying the appropriate unit cost by the quantity. These cost estimates are applicable only when abatement is done on a large scale or when several smaller abatement jobs are done at the same time. For very small jobs, a minimum charge will likely be applied.

TABLE 3-2 UNIT COSTS FOR REMOVAL AND REPLACEMENT OF ACBM

Material Type	Removal Cost^a	Replacement Cost^a
Floor Tile	\$2.25/SF	\$1.90/SF
Floor Tile Mastic	\$4.30/SF	\$1.90/SF
Fire Doors	\$75.00 EA.	\$75.00EA.
Roofing	\$4.50/SF	\$4.50/SF
Pipe Insulation	\$12.00/LF	\$9.00/LF
Cementitious Fitting Insulation	\$15.00 EA.	\$10.50 EA.
Window Caulk	\$9.00/LF	\$5.40/LF
Ceiling Tile	\$4.50/SF	\$3.00/SF
Ceiling Tile Mastic	\$4.50/SF	\$3.00/SF
Vinyl Sheet Flooring	\$2.25/SF	\$1.90/SF
Vinyl Sheet Flooring Mastic	\$4.30/SF	\$1.90/SF
Baseboard Mastic	\$1.50/LF	\$1.00/LF
Leveling Compound	\$6.55/SF	\$1.90/SF
Packing Material	\$12.00/LF	\$9.00/LF
Carpet Mastic	\$4.30/SF	\$1.90/SF
Vinyl Baseboard	\$1.50/LF	\$1.00/LF
Cementitious Sealant on Fiberglass Insulation	\$1.50/LF	\$1.00/LF
Asphalt Sealer (chiller pipe)	\$12.00/LF	\$9.00/LF
Tar Compound Ceiling Material Over Styrofoam	\$4.30/SF	\$1.90/SF
Stair Tread Mastic	\$4.30/SF	\$1.90/SF
Rubber Corner Cover Mastic	\$1.50/LF	\$1.00/LF
Concrete Block Asphalt Sealer	\$4.30/SF	\$1.90/SF

^a Unit costs representative of average obtained from three asbestos abatement contractors.

3.4 ASBESTOS RESULTS

The laboratory submitted a final report including the type and percent of asbestos, project identification, the date of analysis, matrix composition, analyst's name, method, and sample description. Copies of Certificates of Analysis are attached as Appendix C to the back of this report.

Asbestos survey results consist of three forms in table format generated by the Asbestos Database. See Section 3.4, "Asbestos Database," for an explanation of each form.

3.5 ASBESTOS DATABASE

Information collected during the asbestos inspection, and generated through laboratory analysis of submitted samples of suspect ACBM, was input to a database designed to catalog and organize survey data for all DCPS. The database allows the user to manipulate survey data by school number, floor number, room number, homogeneous area number, and sample number within a building, and identifies sample locations, analytical results, exposure potential as measured by hazard ranking, and suspect ACBM quantities. In addition, homogeneous area-

specific information consisting of recommended abatement action and estimated removal and replacement costs is presented for each homogeneous area confirmed or assumed as ACBM identified during the survey. Four forms, in table format, are generated by the Asbestos Database in order to display this information:

Table 1 – Data Summary Form. Summarizes survey data for each school specific to school number, homogeneous area number, material type (thermal, surfacing or miscellaneous), material location and quantity (by floor and room), friability, and hazard ranking.

Table 2 – Sample Location/Results Summary. Summarizes survey data for each school specific to school number, homogeneous area number, sample number, sample location, and analytical result (percent composition and type of asbestos).

Table 3 – Asbestos Management/Cost Summary. Summarizes survey data for each school specific to school number, homogeneous area number, suspect material description, total quantity by building, estimated removal cost by homogeneous area, estimated replacement cost by homogeneous area, and information concerning significantly damaged ACBM.

Table 4 – Damaged and Significantly Damaged ACBM. Summarizes survey data for each school specific to school number, homogeneous area number, suspect material description and quantity, and comments regarding damaged material.

The database is capable of various levels of data manipulation including capabilities for showing changes in ACBM resulting from abatement, demolition, conducting response actions, additional damage, etc., and can be adapted and updated to reflect observations made during routine inspections of the various materials.

4. DATA AND RESULTS

Results of school-specific sampling and descriptions of homogeneous areas of suspect ACBM identified during the survey are included on four forms, in table format, generated by the asbestos database.

Table 1 – Data Summary Form. Summarizes survey data for each school specific to school number, homogeneous area number, material type (thermal, surfacing or miscellaneous), material description, material location and quantity (by floor and room), friability, and hazard ranking.

Definitions

- HA # = Homogeneous area number—Assigned by the inspector to identify suspect ACBM distinguished by material type (thermal system insulation, surfacing, or miscellaneous), size, color, texture, etc. One number only is assigned to each area of suspect ACBM.
- Material Type—AHERA category: S=Surfacing, M= Miscellaneous, T=Thermal
- Material Description—Describes appearance (size, color, texture, etc.) and use of ACBM which has been assigned a homogeneous area number.
- Room Quantity—Quantity of a given homogeneous material within a specific room.
- Units—sf=square feet, lf=linear feet, each=number of individual units
- Friability — Identifies whether the suspect ACBM is friable or non-friable.

Table 2 –Sample Location/Results Summary. Summarizes survey data for each school specific to school number, homogeneous area number, sample number, material description, sample location, and analytical result (percent of asbestos).

Definitions

- HA #—See above.
- Sample #—The unique identification number, assigned by the inspector to bulk samples obtained from suspect ACBM in a given building. Refer to Section 3.1.2 for full sample number definition.
- Material Description—See above.

- **Sample Location**—Indicates from which of the locations of suspected ACBM for a particular homogeneous area the sample was collected. Locations use room number designations on available drawings or assigned by the inspector referring to corresponding numbers on drawings. N=north, S=south, E=east, W=west, NE=northeast, NW= northwest, SE=southeast, SW=southwest, ft=feet
- **%ACM**—Indicates percent of asbestos contained in the submitted sample representing the respective homogenous area. NAD=no asbestos detected; SNA=sample not analyzed; assumed=sample not collected, material assumed ACBM; TR=trace. Asbestos-containing building material is a building material containing greater than 1 percent asbestos.
- **Floor Number and Room Number**—Gives the floor number and room number of sample collection.
- **Assessment Classification**—Gives the assessment category and the preventive measure and response action. See Section 1.2.3 and Table 1-1 of the Asbestos Management Plan.

Table 3 – Asbestos Management/Cost Summary. Summarizes survey data for each asbestos-containing material specific to school number, homogeneous area number, suspect material description, total quantity by school, estimated removal cost by homogeneous area, estimated replacement cost by homogeneous area, and hazard ranking.

Definitions

- **HA #**—See above.
- **Material Description**—See above.
- **Category of Assessment**—Represents one of seven categories assigned by the inspector. See Section 3.2.
- **Response Action**—See Asbestos Management Plan Section 1.2.3.
- **Removal Cost**—See Section 3.3.
- **Replacement Cost**—See Section 3.3.
- **Hazard Ranking**—Identifies into which of seven categories the ACBM was assigned. ACBM assigned a Hazard Rank of 7 will be abated first, a Hazard Rank of 6 will be abated next, etc.

Table 4 – Damaged and Significantly Damaged Areas. Summarizes survey data for each school specific to school number, homogeneous area number containing damage, material description and quantity of damaged area, and comments regarding damaged material.

Definitions

- HA #—See above.
- Material Description—See above.
- Room Quantity—Quantity of damage of a given homogeneous material.
- Units—sf=square feet, lf=linear feet, each=number of individual units
- Comments—Description of the damaged area.

The indexed sections include the following information for each school:

- School description
- Findings
- ACBM hazards
- Total removal and replacement cost
- Recommendations
- Table 1 – Data Summary Form
- Table 2 – Sample Location/Results Summary
- Table 3 – Asbestos Management/Cost Summary
- Table 4 – Damaged and Significantly Damaged ACBM
- Sample location drawings

SCHOOL 300 Powell Elementary School

SCHOOL DESCRIPTION

Powell Elementary School is located on Upshur Street NW, between 13th and 14th Streets, in a residential neighborhood. The building was originally constructed in 1925, and there has been a major addition since.

FINDINGS

Thirty-seven suspect asbestos-containing materials (SACM) were observed during the survey of this school. Five of these materials were confirmed as asbestos-containing through polarized light microscopy (PLM) analysis, and twenty were assumed ACM. The database forms following this narrative list school-specific asbestos inspection, hazard assessment, and asbestos management information.

The types of asbestos-containing material (ACM) identified in School 300 are:

- 9"x9" vinyl floor tile (8)
- Mastic associated with 9"x9" vinyl floor tile (8)
- Tile grout (2)
- 12"x12" vinyl floor tile
- Plaster
- Terrazzo
- Pipe insulation
- Cementitious fitting
- Tank insulation
- Breeching

At the time of the survey, damaged and friable material was identified in isolated areas. See Table 4.

REMOVAL AND REPLACEMENT COST

The total removal and replacement cost for ACBM identified in School 300 is \$473,559.10. The individual removal and replacement cost for each homogeneous area of ACBM can be found in Table 3, "Asbestos Management/Cost Summary."

RECOMMENDATIONS

The damaged and significantly damaged ACBM identified in Table 4 should be abated and the materials maintained in good condition through inclusion in an O&M program.

All other ACBM identified in School 300 should also be included in an O&M program.

Because asbestos content in vinyl flooring materials may be misidentified due to resolution limitations of PLM and/or interference from matrix components, vinyl flooring materials reported as containing a “trace” or <1% asbestos, or reported as non-asbestos, should be considered for additional analysis via TEM prior to maintenance activities involving their disturbance. TEM analysis will provide assurance of actual asbestos content.

TABLE 1

ASBESTOS DATA SUMMARY FORM

Table 1. Data Summary Form

16-Jun-99

Building Number	Homogeneous Area	Sample Number	Material Type	Material Description	Room Quantity	Units	Floor Number	Room Number	Friability
300	01		M	Floor Tile, BLACK, 9"X9", WITH LIGHT MARKS	72	SF	1	114	NON-FRIABLE
300	02		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 01	72	SF	1	114	NON-FRIABLE
300	03		M	Floor Tile, BROWN, 9"X9", WITH WHITE AND RED MARKS	72	SF	1	114	NON-FRIABLE
300	04		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 03	72	SF	1	114	NON-FRIABLE
300	05		M	Floor Tile, WHITE, 9"X9", WITH DARK BLUE STREAKS	924	SF	1	101	NON-FRIABLE
300	06		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 05	924	SF	1	101	NON-FRIABLE
300	07		M	Floor Tile, TAN, 9"X9", WITH WHITE STREAKS	286	SF	1	106	NON-FRIABLE
300	08		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 07	286	SF	1	106	NON-FRIABLE
300	09		M	Floor Tile, BROWN, 9"X9", WITH LIGHT AND DARK BROWN MARKS	374	SF	1	112	NON-FRIABLE
300	09		M	Floor Tile, BROWN, 9"X9", WITH LIGHT AND DARK BROWN MARKS	484	SF	2	208	NON-FRIABLE
300	09		M	Floor Tile, BROWN, 9"X9", WITH LIGHT AND DARK BROWN MARKS	810	SF	STAIRS	2-5	NON-FRIABLE

Table 1. Data Summary Form*16-Jun-99*

Building Number	Homogeneous Area	Sample Number	Material Type	Material Description	Room Quantity	Units	Floor Number	Room Number	Friability
300	10		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 09	374	SF	1	112	NON-FRIABLE
300	10		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 09	484	SF	2	208	NON-FRIABLE
300	10		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 09	810	SF	STAIRS	2-5	NON-FRIABLE
300	11		M	Floor Tile, RED CLAY, 9"X9", WITH KARK REDISH, BROWN AND PINK MARKS	374	SF	1	112	NON-FRIABLE
300	11		M	Floor Tile, RED CLAY, 9"X9", WITH KARK REDISH, BROWN AND PINK MARKS	484	SF	2	208	NON-FRIABLE
300	12		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 11	484	SF	1	112	NON-FRIABLE
300	12		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 11	484	SF	2	208	NON-FRIABLE
300	13		M	Floor Tile, BEIGE, 9"X9", WITH MAROON AND WHITE STREAKS	704	SF	1	103	NON-FRIABLE
300	13		M	Floor Tile, BEIGE, 9"X9", WITH MAROON AND WHITE STREAKS	694	SF	1	104	NON-FRIABLE
300	13		M	Floor Tile, BEIGE, 9"X9", WITH MAROON AND WHITE STREAKS	704	SF	1	105	NON-FRIABLE
300	13		M	Floor Tile, BEIGE, 9"X9", WITH MAROON AND WHITE STREAKS	418	SF	1	106	NON-FRIABLE

Table 1. Data Summary Form*16-Jun-99*

Building Number	Homogeneous Area	Sample Number	Material Type	Material Description	Room Quantity	Units	Floor Number	Room Number	Friability
300	13		M	Floor Tile, BEIGE, 9"X9", WITH MAROON AND WHITE STREAKS	176	SF	1	107	NON-FRIABLE
300	13		M	Floor Tile, BEIGE, 9"X9", WITH MAROON AND WHITE STREAKS	1056	SF	1	108	NON-FRIABLE
300	13		M	Floor Tile, BEIGE, 9"X9", WITH MAROON AND WHITE STREAKS	660	SF	2	201	NON-FRIABLE
300	13		M	Floor Tile, BEIGE, 9"X9", WITH MAROON AND WHITE STREAKS	660	SF	2	202	NON-FRIABLE
300	13		M	Floor Tile, BEIGE, 9"X9", WITH MAROON AND WHITE STREAKS	660	SF	2	203	NON-FRIABLE
300	13		M	Floor Tile, BEIGE, 9"X9", WITH MAROON AND WHITE STREAKS	704	SF	2	204	NON-FRIABLE
300	13		M	Floor Tile, BEIGE, 9"X9", WITH MAROON AND WHITE STREAKS	704	SF	2	205	NON-FRIABLE
300	13		M	Floor Tile, BEIGE, 9"X9", WITH MAROON AND WHITE STREAKS	704	SF	2	206	NON-FRIABLE
300	13		M	Floor Tile, BEIGE, 9"X9", WITH MAROON AND WHITE STREAKS	308	SF	2	207	NON-FRIABLE
300	13		M	Floor Tile, BEIGE, 9"X9", WITH MAROON AND WHITE STREAKS	1200	SF	2	C-10	NON-FRIABLE
300	13		M	Floor Tile, BEIGE, 9"X9", WITH MAROON AND WHITE STREAKS	1200	SF	2	C-12	NON-FRIABLE

Table 1. Data Summary Form

16-Jun-99

Building Number	Homogeneous Area	Sample Number	Material Type	Material Description	Room Quantity	Units	Floor Number	Room Number	Friability
300	14		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 13	704	SF	1	103	NON-FRIABLE
300	14		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 13	694	SF	1	104	NON-FRIABLE
300	14		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 13	704	SF	1	105	NON-FRIABLE
300	14		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 13	418	SF	1	106	NON-FRIABLE
300	14		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 13	176	SF	1	107	NON-FRIABLE
300	14		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 13	1056	SF	1	108	NON-FRIABLE
300	14		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 13	660	SF	2	201	NON-FRIABLE
300	14		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 13	660	SF	2	202	NON-FRIABLE
300	14		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 13	660	SF	2	203	NON-FRIABLE
300	14		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 13	704	SF	2	204	NON-FRIABLE
300	14		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 13	704	SF	2	205	NON-FRIABLE

Table 1. Data Summary Form*16-Jun-99*

Building Number	Homogeneous Area	Sample Number	Material Type	Material Description	Room Quantity	Units	Floor Number	Room Number	Friability
300	14		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 13	704	SF	2	206	NON-FRIABLE
300	14		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 13	308	SF	2	207	NON-FRIABLE
300	14		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 13	1200	SF	2	C-10	NON-FRIABLE
300	14		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 13	1200	SF	2	C-12	NON-FRIABLE
300	15		M	Floor Tile, GREEN, 9"X9", WITH WHITE AND DARK BLUE STREAKS	680	SF	2	C-12	NON-FRIABLE
300	16		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 15	680	SF	2	C-12	NON-FRIABLE
300	17	300-17A	M	Floor Tile, TAN, 12"X12", WITH TAN, BROWN AND WHITE MARKS	176	SF	1	113	NON-FRIABLE
300	18	300-18A	M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 17	176	SF	1	113	NON-FRIABLE
300	19	300-19A	M	Floor Tile, DARK GRAY, 12"X12", WITH WHITE AND BLACK MARBLE PATTERN	176	SF	1	113	NON-FRIABLE
300	20	300-20A	M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 19	176	SF	1	113	NON-FRIABLE
300	21	300-21A	M	Floor Tile, TAN, 12"X12", WITH REDISH BROWN AND WHITE MARKS	25	SF	2	C-10	NON-FRIABLE

Table 1. Data Summary Form

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Building Number	Homogeneous Area	Sample Number	Material Type	Material Description	Room Quantity	Units	Floor Number	Room Number	Friability
300	21		M	Floor Tile, TAN, 12"X12", WITH REDISH BROWN AND WHITE MARKS	20	SF	2	C-12	NON-FRIABLE
300	22	300-22A	M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 21	25	SF	2	C-10	NON-FRIABLE
300	22		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 21	20	SF	2	C-12	NON-FRIABLE
300	23		M	Floor Tile, BROWN, 12"X12", WITH WHITE AND BLACK AND TAN MARKS	10	SF	1	104	NON-FRIABLE
300	23		M	Floor Tile, BROWN, 12"X12", WITH WHITE AND BLACK AND TAN MARKS	15	SF	1	C-10	NON-FRIABLE
300	23	300-23A	M	Floor Tile, BROWN, 12"X12", WITH WHITE AND BLACK AND TAN MARKS	2520	SF	1	CAFETERIA	NON-FRIABLE
300	23	300-23B	M	Floor Tile, BROWN, 12"X12", WITH WHITE AND BLACK AND TAN MARKS	0	SF	1	CAFETERIA	NON-FRIABLE
300	24		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 23	10	SF	1	104	NON-FRIABLE
300	24		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 23	15	SF	1	C-10	NON-FRIABLE
300	24	300-24A	M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 23	2520	SF	1	CAFETERIA	NON-FRIABLE
300	24	300-24B	M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 23	0	SF	1	CAFETERIA	NON-FRIABLE

Table 1. Data Summary Form

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Building Number	Homogeneous Area	Sample Number	Material Type	Material Description	Room Quantity	Units	Floor Number	Room Number	Friability
300	25		M	Vinyl Sheeting, BROWN, , WOOD GRAIN	990	SF	1	109	NON-FRIABLE
300	25	300-25A	M	Vinyl Sheeting, BROWN, , WOOD GRAIN	352	SF	2	213	NON-FRIABLE
300	26		M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 25	990	SF	1	109	NON-FRIABLE
300	26	300-26A	M	Floor Mastic, , , MASTIC ASSOCIATED WITH HA 25	352	SF	2	213	NON-FRIABLE
300	27		S	Plaster, , ,	176	SF	1	107	NON-FRIABLE
300	27		S	Plaster, , ,	100	SF	1	108	NON-FRIABLE
300	27		S	Plaster, , ,	1435	SF	1	109	NON-FRIABLE
300	27		S	Plaster, , ,	1148	SF	1	110, PRINCIPAL' S OFFICE	NON-FRIABLE
300	27		S	Plaster, , ,	1244	SF	1	111	NON-FRIABLE
300	27		S	Plaster, , ,	1308	SF	1	112	NON-FRIABLE
300	27	300-27G	S	Plaster, , ,	1264	SF	1	113	NON-FRIABLE

Table 1. Data Summary Form*16-Jun-99*

Building Number	Homogeneous Area	Sample Number	Material Type	Material Description	Room Quantity	Units	Floor Number	Room Number	Friability
300	27		S	Plaster, , ,	408	SF	1	BOY'S RESTROOM	NON-FRIABLE
300	27		S	Plaster, , ,	1616	SF	1	CAFETERIA	NON-FRIABLE
300	27		S	Plaster, , ,	408	SF	1	GIRL'S RESTROOM	NON-FRIABLE
300	27		S	Plaster, , ,	2780	SF	1	LOBBY	NON-FRIABLE
300	27	300-27B	S	Plaster, , ,	810	SF	1	NEW STAIRS	NON-FRIABLE
300	27		S	Plaster, , ,	1920	SF	1	STAGE	NON-FRIABLE
300	27		S	Plaster, , ,	36	SF	1-N	CUSTODIAN	NON-FRIABLE
300	27		S	Plaster, , ,	220	SF	1-N	GIRL'S RESTROOM	NON-FRIABLE
300	27		S	Plaster, , ,	308	SF	2	207	NON-FRIABLE
300	27		S	Plaster, , ,	540	SF	2	210	NON-FRIABLE
300	27		S	Plaster, , ,	540	SF	2	211	NON-FRIABLE

Table 1. Data Summary Form*16-Jun-99*

Building Number	Homogeneous Area	Sample Number	Material Type	Material Description	Room Quantity	Units	Floor Number	Room Number	Friability
300	27		S	Plaster, , ,	540	SF	2	212	NON- FRIABLE
300	27	300-27D	S	Plaster, , ,	0	SF	2	213	NON- FRIABLE
300	27	300-27C	S	Plaster, , ,	988	SF	2	213	NON- FRIABLE
300	27		S	Plaster, , ,	408	SF	2	BOY'S RESTROOM	NON- FRIABLE
300	27		S	Plaster, , ,	4672	SF	2	C-11	NON- FRIABLE
300	27		S	Plaster, , ,	1592	SF	2	C-12	NON- FRIABLE
300	27		S	Plaster, , ,	576	SF	2	COUNSEL LAB	NON- FRIABLE
300	27		S	Plaster, , ,	996	SF	2	CUSTODIAN	NON- FRIABLE
300	27		S	Plaster, , ,	672	SF	2	GIRL'S RESTROOM	NON- FRIABLE
300	27		S	Plaster, , ,	1948	SF	2	LIBRARY	NON- FRIABLE
300	27	300-27E	S	Plaster, , ,	768	SF	2	STORES	NON- FRIABLE

Table 1. Data Summary Form

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Building Number	Homogeneous Area	Sample Number	Material Type	Material Description	Room Quantity	Units	Floor Number	Room Number	Friability
300	27		S	Plaster, , ,	176	SF	2	TEACHER'S RESTROOM	NON-FRIABLE
300	27		S	Plaster, , ,	220	SF	2-N	BOY'S RESTROOM	NON-FRIABLE
300	27		S	Plaster, , ,	600	SF	B	BOILER	NON-FRIABLE
300	27	300-27A	S	Plaster, , ,	810	SF	STAIRS	2-5	NON-FRIABLE
300	27	300-27F	S	Plaster, , ,	0	SF	STAIRS	2-5	NON-FRIABLE
300	28		S	Plaster, , , TEXTURED PLASTER	1610	SF	1	CAFETERIA	NON-FRIABLE
300	29		M	Wall Board, , , GYPSUM BOARD	154	SF	1	110	NON-FRIABLE
300	29	300-29A	M	Wall Board, , , GYPSUM BOARD	276	SF	1	112	NON-FRIABLE
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	140	SF	1	106	NON-FRIABLE
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	246	SF	1	111	NON-FRIABLE
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	80	SF	1	113	NON-FRIABLE

Table 1. Data Summary Form

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Building Number	Homogeneous Area	Sample Number	Material Type	Material Description	Room Quantity	Units	Floor Number	Room Number	Friability
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	476	SF	1	BOY'S RESTROOM	NON-FRIABLE
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	2424	SF	1	CAFETERIA	NON-FRIABLE
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	476	SF	1	GIRL'S RESTROOM	NON-FRIABLE
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	120	SF	1-N	CUSTODIAN	NON-FRIABLE
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	270	SF	1-N	GIRL'S RESTROOM	NON-FRIABLE
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	2752	SF	2	11-C	NON-FRIABLE
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	216	SF	2	210	NON-FRIABLE
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	216	SF	2	211	NON-FRIABLE
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	216	SF	2	212	NON-FRIABLE
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	64	SF	2	213	NON-FRIABLE
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	476	SF	2	BOY'S RESTROOM	NON-FRIABLE

Table 1. Data Summary Form

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Building Number	Homogeneous Area	Sample Number	Material Type	Material Description	Room Quantity	Units	Floor Number	Room Number	Friability
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	456	SF	2	C-12	NON-FRIABLE
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	456	SF	2	GIRL'S RESTROOM	NON-FRIABLE
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	300	SF	2	TEACHER'S RESTROOM	NON-FRIABLE
300	30		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC WALL TILE	270	SF	2-N	BOY'S RESTROOM	NON-FRIABLE
300	31		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC FLOOR TILE	48	SF	1	108	NON-FRIABLE
300	31		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC FLOOR TILE	16	SF	1	113	NON-FRIABLE
300	31		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC FLOOR TILE	264	SF	1	BOY'S RESTROOM	NON-FRIABLE
300	31		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC FLOOR TILE	264	SF	1	GIRL'S RESTROOM	NON-FRIABLE
300	31		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC FLOOR TILE	36	SF	1-N	CUSTODIAN	NON-FRIABLE
300	31		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC FLOOR TILE	220	SF	1-N	GIRL'S RESTROOM	NON-FRIABLE
300	31		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC FLOOR TILE	16	SF	2	213	NON-FRIABLE

Table 1. Data Summary Form

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Building Number	Homogeneous Area	Sample Number	Material Type	Material Description	Room Quantity	Units	Floor Number	Room Number	Friability
300	31		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC FLOOR TILE	264	SF	2	BOY'S RESTROOM	NON-FRIABLE
300	31		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC FLOOR TILE	264	SF	2	GIRL'S RESTROOM	NON-FRIABLE
300	31		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC FLOOR TILE	176	SF	2	TEACHER'S RESTROOM	NON-FRIABLE
300	31		M	Tile Grout, , , GROUT ASSOCIATED WITH CERAMIC FLOOR TILE	220	SF	2-N	BOY'S RESTROOM	NON-FRIABLE
300	32		M	Terrazzo, , ,	1140	SF	1	C-9	NON-FRIABLE
300	32		M	Terrazzo, , ,	1920	SF	2	C-11	NON-FRIABLE
300	33	300-33B	T	Pipe Insulation, , ,	0	LF	B-0	TUNNEL	NON-FRIABLE
300	33	300-33C	T	Pipe Insulation, , ,	0	LF	B-0	TUNNEL	NON-FRIABLE
300	33	300-33A	T	Pipe Insulation, , ,	700	LF	B-0	TUNNEL	NON-FRIABLE
300	34	300-34C	T	Cementitious Fitting, , , MUDDDED JOINT ON FIBERGLASS LINES	100	EA	B	OLD TUNNEL	NON-FRIABLE
300	34	300-34A	T	Cementitious Fitting, , , MUDDDED JOINT ON FIBERGLASS LINES	100	EA	B	TUNNEL	NON-FRIABLE

Table 1. Data Summary Form

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Building Number	Homogeneous Area	Sample Number	Material Type	Material Description	Room Quantity	Units	Floor Number	Room Number	Friability
300	34	300-34B	T	Cementitious Fitting, , , MUDDDED JOINT ON FIBERGLASS LINES	0	EA	B	TUNNEL	NON-FRIABLE
300	35	300-35A	T	Cementitious Fitting, , , MUDDDED JOINT	45	EA	B	BOILER	NON-FRIABLE
300	35	300-35B	T	Cementitious Fitting, , , MUDDDED JOINT	0	EA	B	BOILER	NON-FRIABLE
300	35	300-35C	T	Cementitious Fitting, , , MUDDDED JOINT	0	EA	B	BOILER	NON-FRIABLE
300	35		T	Cementitious Fitting, , , MUDDDED JOINT	50	EA	B	TUNNEL	NON-FRIABLE
300	36	300-36A	T	Tank Insulation, , ,	400	SF	B	BOILER	NON-FRIABLE
300	36	300-36B	T	Tank Insulation, , ,	0	SF	B	BOILER	NON-FRIABLE
300	36	300-36C	T	Tank Insulation, , ,	0	SF	B	BOILER	NON-FRIABLE
300	37	300-37A	T	Breeching, , ,	250	SF	B	BOILER	NON-FRIABLE
300	37	300-37B	T	Breeching, , ,	0	SF	B	BOILER	NON-FRIABLE
300	37	300-37C	T	Breeching, , ,	0	SF	B	BOILER	NON-FRIABLE